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ABSTRACT

Elementary school students were ranked by teachers on scales measuring personality characteristics and teacher expectations. Classroom observers also rated the students to assess the validity of teacher rankings and to determine whether teachers and observers use the same characteristics in forming perceptions of students. Teacher rankings and observer ratings were analyzed for sex and grade level differences, and the results were compared. Though some halo effect was evident in teacher rankings, both teachers and observers agreed in perceiving girls more favorably than boys, indicating that real student sex differences are reflected rather than teacher bias. Grade level main effects in observer ratings reflect maturational differences between grades. Grade by sex interactions, reflecting developmental differences between males and females, appeared for some rating scales. (Author/MJB)

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The main objective of the CORRELATES OF EFFECTIVE TEACHING PROJECT is to expand the number of teaching principles based on documented findings from systematic classroom research. The problems and processes studied have been selected on the basis of observation and consultation with teachers and school personnel. Emphasis is on the study of the classroom to discover how these processes can be conducted to the greatest advantage of teachers and individual students.

One of the project's major efforts was a two-year study of teaching effectiveness involving the examination of the classroom behavior of teachers consistent in producing student learning gains.

Since 1974 three other major data collection efforts were initiated and completed.

(1) STUDENT ATTRIBUTE STUDY which looked at student characteristics and behaviors and their effects on teachers.

(2) FIRST GRADE READING GROUP STUDY, an experimental study designed to test the effectiveness of selected group management techniques in teaching reading.

(3) JUNIOR HIGH SCHOOL STUDY, a follow up on earlier work from the second and third grades of the influence of teacher characteristics and behavior on students' cognitive and affective gains.

SEX AND GRADE LEVEL DIFFERENCES IN RATINGS OF STUDENTS BY TEACHERS AND CLASSROOM OBSERVERS

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Sex and Grade Level Differences in Ratings of Students by Teachers and Classroom Observers

This report presents a subset of data from the Student Attribute Study, a two-year study conducted for the purpose of identifying student behaviors and patterns of dyadic interaction that are related to the formation of teacher perceptions and attitudes toward individual students.

The design of the Student Attribute Study involved: 1.) the identification of elementary school children who were ranked consistently (across two years and by two teachers) on one or more of 13 bipolar scales assessing teacher perceptions of student ability, personality, and work habits; and 2.) systematic classroom observation of these consistently perceived children. Process data were analyzed for systematic differences among student types, and inferences were made about what student characteristics and behaviors lead teachers to form particular attitudes toward their children.

In addition, classroom observers rated the children on the same scales used by the teachers. This was done partly to gauge the external validity of the teacher rankings, but also to see whether observers and teachers focus on the same student characteristics in forming attitudes toward students. This paper will present the results of analyses of grade level and sex differences in both teacher rankings and observer ratings, as well as a comparison of the grade level and sex differences found in the teacher rankings with those found in observer ratings. For a full description of the methodology for the Student Attribute Study as a whole, see Baum, Brophy, Evertson, Crawford, & Anderson, Note 1.

A great deal has been learned about how teacher expectations and attitudes toward students can affect classroom processes. Teacher expectations toward students apparently can serve as self-fulfilling prophecies, not only influencing teacher-student interaction patterns, but often exerting a measurable effect on student achievement levels as well. This process is commonly referred to as the "Pygmalion effect" (Rosenthal and Jacobson, 1968) The mechanisms through which teachers communicate attitudes and expectancies through differential treatment of students, and how these differences may in turn influence student behavior, have been the subjects of considerable research (Brophy & Good, 1974; Baker & Crist, 1971). However, little is known about how teacher perceptions originate: what student characteristics do teachers use in forming impressions and opinions about their students, and what types of student behaviors maintain or alter these perceptions?

A related body of research has dealt with the commonalities in teacher perceptions: the widespread teacher attitudes engendered by the most salient student attributes, such as race, ethnicity, and sex. Student sex differences have been studied extensively, generally using high inference measures, in investigations focusing on differences in teacher attitudes towards males and females. The most common finding is that teachers hold more favorable attitudes towards girls than boys.

Girls typically are described as calmer, more cooperative, more mature, and more attractive. Though there is no difference between boys and girls in general intelligence, girls perform better in school, especially in the early grades (Brophy & Good, 1974). These findings sometimes are interpreted

to mean that female teachers are biased against male students, but this idea has not been supported in studies that included male teachers. This report will present further information concerning sex differences in teacher attitudes in four elementary grades. It also will provide a comparison of teacher perceptions with the perceptions of classroom observers, to see if perhaps teachers are justified in their more negative attitudes toward male students.

In investigating the effects of sex differences in teacher-student interactions, the role of grade level differences has largely been overlooked. However, recent research has shown that grade level is an important variable that must be taken into acccount in the interpretation and application of classroom research findings (Brophy & Evertson, in press). Also, the contexts in which classroom processes occur (reading group, drill, discussion, etc.) affect the extent to which findings may be generalized (Dunkin & Biddle, 1974).

These considerations are especially applicable to studies of teacher attitude formation. Certain student behaviors or characteristics may be more crucial to the learning process in some grades than in others. It would not be surprising, then, to find that teachers at one grade level attend to particular student characteristics in forming attitudes, while teachers at another grade level attend to a different set of student attributes. It also would be expected that student behavior in later grades would differ from that in earlier grades, both in quantity and quality; this too would be expected to affect teacher perceptions. The Student Attribute Study, since it involved grades two through five, allowed assessment of the effect of grade level on teacher perceptions; these findings will be discussed in this report.

Though this report does not deal directly with the major findings of the study, the Student Attribute Study as a whole illustrates a new method of investigating the dynamics of teacher-student interaction. It also provides answers to some of the questions concerning the ways that teacher perceptions and attitudes originate.

Method

Teachers from four lower and middle class elementary schools were asked to rank their students on 13 bipolar scales: calm versus restless, careful versus careless, happy versus unhappy, probable highest achiever versus probable lowest achiever, mature versus immature, cooperative versus uncooperative, creative versus not creative, attractive versus unattractive, persistent versus gives up easily, would like to keep the student for another year for the sheer joy of it versus would like to have removed, doesn't require special attention versus requires special attention and concerns me a great deal, very noticeable versus not noticeable, and looks you in the eye versus averts eyes.

These ranking scales were designed to assess teacher perceptions and attitudes towards students, especially those likely to affect teacher-student interaction patterns. The forms the teachers used to rank their students consisted of 13 7-point scales. A ranking of "1" constituted the low, negative end of the scale, and a ranking of "7" constituted the high, positive end of the scale. In Year 1, the teachers actually ranked their entire classes on all 13 scales. This procedure was time consuming, and it required

questionable paired-comparison discriminations, especially in the middles of the distributions. Thus, in Year 2, teachers used simplified forced choice 7-point scales, placing two students in each extreme category, three in the next categories, four in the next, and everyone else in the middle.

In the first year, teachers in grades one through four filled out rankings on three separate occasions: at the beginning, middle, and end of the school year. The following year, these same children, now in grades two through five, again were ranked, this time by their current teachers, on the same 13 scales. This time, two rankings were obtained: at the middle and the end of the school year. These five sets of rankings then were analyzed to identify those students who received consistent rankings from two teachers across two years on one or more of the 13 scales.

For purposes of evaluating students for consistency in rankings in the first year of the study, the scales were each divided into thirds. For students to be classified as consistent on a given scale, the three teacher rankings for that year all had to fall within the same third of the scale. If they did not all fall within the same third, the child was categorized as a "mover" (consistent upward or downward movement across time) or as "inconsistent."

A student who received teacher rankings of "1" to "3" on a scale was given an overall ranking of "1" for that scale; a student who received rankings of "3" to "5" was given a "2"; and a student ranked "5" to "7" was given a "3". If a child could be assigned an overall ranking of "1," "2," or "3," he/she was classified as consistent on that scale. The same

procedure was used with the rankings obtained in the second year.

The rankings from both years of the study then were combined, and students who received consistent rankings across both years on at least one scale were identified and assigned an overall ranking for that scale. A total of 362 students in grades two to five received consistent rankings across both years, and these served as target students for the study.

In the last half of the second year of the study, target students were observed for 10 half-day observation periods (approximately 25 to 30 hours). Teacher-student interactions and student behaviors were coded with a multi-faceted low inference observational system designed to record the contextual, affective, and qualitative aspects of dyadic interactions between the teacher and students (Brophy, King, Evertson, Baum, Crawford, Mahaffey, & Sherman, Note 2). Coders were trained to the reliability criterion (80% inter-coder agreement for each major category of the system), and two coders were assigned to every classroom. Coders alternated visits, each coder making five independent half-day observations.

After all observations were completed, coders rated the target students they observed on the same 13 scales the teachers had used (but without knowledge of how the teachers had rated these children). The form used by coders to rate the target children was similar to the one used by the teachers, except that 3-point scales were employed. Each observed target child received a rating on each scale, even though each child had received "consistent" teacher rankings on only some of the scales. If coders felt they could not accurately rate a certain student on a particular scale, no data were recorded.

Data Analysis

Two way sex (males versus females) by grade (four levels -- second through fifth) analyses of variance were conducted on the 13 teacher ranking scales. Each child consistent on a given scale had one overall ranking (a "1," "2," or "3"). For each scale, overall rankings for "consistent" target students were separated by grade level and sex, and then summed and averaged to obtain cell means. Since students received a "1" if they were ranked consistently in the bottom third of the scale, a "2" if ranked consistently in the middle third of the scale, and a "3" if ranked consistently in the upper third of the scale, cell means for the analyses of the teacher ranking data ranged from 1.0 to 3.0. Cell N's differed from scale to scale, since not every child was consistent on every scale (see Table 1). The data analysis program used made appropriate adjustments for unequal cell N's within separate analyses.

Insert Table 1 about here

Sex by grade analyses of variance also were conducted on the 13 rating scales filled out by coders. Coders rated all of the target students they observed on all scales. Even children who were "inconsistent" on a scale received a rating (since they were consistent on some other scale and hence were target students), and these ratings were included in the analyses of that scale. So, in considering comparisons of teacher ranking data with coder rating data, it should be kept in mind that the samples used in analyses of teacher rankings were subsets of the samples used in the analyses

of coder ratings. The analyses of each teacher ranking scale included only those target students who were consistent on that scale, while the analyses of each coder rating scale usually included all target students.

Since coder ratings were 3-point scales, they were comparable to the teacher ratings (which had been reduced from seven to three points). Each target student was observed and ranked by two coders, so that the two sets of ratings obtained for each child were added together, yielding a range of 2.0 to 6.0 for coder ratings (ratings were doubled when only one was made).

The sex x grade analyses were appropriate and readily interpretable for the coder data, because coders saw classes at different grade levels. Grade main effects could not be obtained in the analyses of teacher data, however, because teachers rated the students in their particular classes relative to classmates but not to students in other grades. Even so, two-way analyses of variance were used to analyze these teacher data, because such analyses could reveal grade x sex interactions.

Results

Sex main effects in teacher rankings and coder ratings will be reported first, followed by grade level main effects and interactions. Uninterpretable, non-monotonic grade level differences and interactions will not be discussed, although they are in the tables.

The most salient characteristic of the teacher ranking data was the consistency with which girls were perceived more favorably than boys (main effects for student sex reached significance at the .05 level on 11

of 13 scales). Means, standard deviations, and source data for these teacher rankings are presented in Table 2.

Insert Table 2 about here

Girls were ranked as calmer, happier, and as more careful, mature, cooperative, attractive, and persistent than boys. Teachers also chose girls over boys as the students who were high achievers, whom they would most like to keep, and who looked you in the eye. Boys were ranked significantly higher than girls only as requiring more special attention from the teacher. However, boys were not perceived by teachers as being more noticeable in the classroom than girls, contrary to earlier research findings (Brophy & Good, 1974).

In contrast to the teacher rankings, the coder ratings showed a significant main effect for sex on only six of the 13 scales. Means, standard deviations, and source data are presented in Table 3.

Insert Table 3 about here

Again, girls were perceived as being calmer, more careful, high achievers, and more cooperative than boys, but unlike the teacher rankings, no significant sex differences were found for the scale of happiness, maturity, attractiveness, attachment, or looks you in the eye. Boys again were rated as requiring more special attention than girls, but neither sex was perceived as more salient or noticeable in the classroom.

Significant main effects for grade level were less frequent than for sex. No grade level main effects were possible in the teacher ranking data, because the within-class forced-choice method precluded grade differences. In the coder ratings, a significant effect for grade level was found for two scales. As might be expected, children in the higher grades were perceived by coders as more mature than the younger students, and children in the lower grades were seen as needing more special attention.

Grade by sex interactions also were infrequent. In the teacher rankings, only the calm versus restless scale produced a significant grade by sex interaction. Girls were ranked as calmer than boys in grades 2, 3, and 4, but they received progressively lower ratings as grade level increased. By grade 5, they were ranked lower than boys on this scale. In the coder rating data, the achievement and persistence scales both produced a disordinal grade by sex interaction. For both scales, girls were rated higher than boys in grades 2, 3, and 4, but lower than boys in grade 5. The means for each grade show that the ratings for girls were fairly stable across grade levels, while boys received progressively higher ratings with increased grade level. These findings support sex difference explanations based on maturational differences between males and females in the elementary grades, as well as previous findings that the gap between the sexes in school achievement decreases across the middle childhood years (Maccoby, 1966).

Agreement Between Teachers and Classroom Observers

The degree of agreement in perceptions of students between teachers and classroom observers is reflected in the correlation coefficients shown

in Table 4. Although all of these coefficients were statistically significant, none were particularly high. Some truncation of correlations was expected because classroom observers used only 3-point scales. Correlations in the .40 to .50 range were expected. Seven of the 13 coefficients were within or near this range, with two higher and four lower. The relative differences fit with our expectations based upon estimates of observers' probable abilities to observe and accurately rate for these student characteristics, with the exception of the low correlation for "would like to keep in class" versus "would like to have removed from the class" (a measure of general likability of the student).

Insert Table 4 about here

The low correlation for this measure indicates that teachers and observers used somewhat different criteria in responding to this scale, so that student attributes which endeared them to or alienated them from teachers were not the same ones that affected classroom observers this way. This finding is not surprising, given the fact that teachers play a teaching role and respond to students primarily with respect to how they play the student role, whereas observers considered the students more broadly as children being viewed by relatively uninvolved adults.

Also, teacher ratings showed strong halo effects, being much more highly intercorrelated than coder ratings. In particular, children who were highly achieving and conforming were rated as more likeable by teachers than children who were less achieving or conforming, whereas classroom

observers were less affected by these school-specific attributes in forming generalized attitudes or like or dislike towards the students.

Discussion

A great deal of concern has been centered on sex differences in teacher attitudes toward students. Special attention has been given to differential teacher perceptions of achievement. Analyses of the 13 rating scales revealed a significant sex difference in perceptions of student achievement by both teachers and coders. These results are in accord with the well known findings that girls typically outperform boys in the early grades in American schools. The fact that coders also perceived these differences supports the accuracy of the teacher perceptions.

However, teachers and coders did not agree in their perceptions of other personal attributes. On the scales of happy versus unhappy, mature versus immature, attractive versus unattractive, would like to keep versus would like to have removed, and looks you in the eye versus averts eyes, teachers perceived girls more favorably than boys, while coders saw no sex differences. These contrasts between coder perceptions and teacher perceptions may be due to halo effects in the teacher rankings. However, structuring of teacher perceptions by the constraints of the teacher and student roles probably also is involved.

The primary concern and responsibility of most teachers is student performance. Perceptions of performance level, therefore, appear to be critical to interactions with students in the academic setting. In addition

to its importance to the teacher role, performance level is one student characteristic that can be measured easily, and one on which teachers have objective data to base their perceptions. So, since teachers (correctly) perceive girls as higher achievers than boys, it may be that favorable perceptions on this important characteristic are generalized to other student attributes. Students who perform well in the classroom provide positive reinforcement for their teachers, and they may be perceived more favorably overall as a result.

Since coders have no reason to be particularly concerned about or involved with student performance (and also do not have the information on academic performance that teachers do), their impressions of students are less apt to be colored by performance level. This makes coders less susceptible to the formation of <u>overall</u> attitudes of favor or disfavor based on performance. Therefore, the finding that coders do not share teacher perceptions of sex differences on the scales of happiness, maturity, attractiveness, attachment, and looks you in the eye, may be due to a lesser preoccupation with academic performance.

Teachers and coders did agree in perceiving girls more favorably than boys on the scales of persistent, calm, careful, cooperative, and needs special attention (girls seen as requiring less special attention than boys). These scales deal primarily with student work habits; the more favorable attitudes towards girls on these scales could be interpreted as the result of logical errors arising from girls' superior academic performance. However, since the data from teachers and coders agree, it seems reasonable to assume

that they reflect real differences in student behavior. Girls, as higher achievers, probably are more persistent in doing class work, and probably do not require as much special attention from the teacher in order to master the subject matter. It also is likely that girls are more careful and cooperative than boys, due to socialization pressures on them to be orderly and acquiescent.

As mentioned previously, main effects for grade level appeared only in the coder data, because the teacher data did not allow any such effects to appear. Not surprisingly, the grade main effects in the coder data showed that coders perceived children in the higher grades as more mature than students in the lower grades, and saw children in the higher grades as requiring less special attention.

The teacher ranking data produced a significant grade by sex interaction only on the scale of calm versus restless (The significant main effect for sex on this scale was discussed earlier.). The cell means for the scale show that girls were ranked progressively lower on calmness as grade level increased, while boys showed a sudden jump in the 5th grade rankings. Higher rankings for boys than girls in the 5th grade coincide with findings indicating that males in the later elementary grades exhibit a development "spurt," and that they gradually begin to overtake the females in academic achievement. Girls, on the other hand, seem to "top-out" at this age in their social adjustment and academic performance. So, it seems probable that teacher perceptions on this scale reflect actual developmental changes in behavior. Also, since restless, sporadic activity tends to disrupt classroom processes, teachers are very aware when students begin to "settle down," and thus may

be more apt to form accurate perceptions on this scale than on some of the others.

The coder rating scales of achievement and persistence both showed significant grade x sex interactions, as well as the main effects for student sex discussed above. The patterns are very similar, which was expected because the scales are highly correlated (Brophy, Evertson, Baum, Crawford, & Anderson, Note 3). On both scales, boys received higher ratings as grade level increased, being rated higher than girls in 5th grade. The ratings for girls either remained stable or dropped slightly as grade level increased. These results are explained most easily in terms of the changes in rates of development between males and females that were discussed previously in relation to the grade x sex interaction on the scale of calm versus restless.

The creative versus not creative and stands out versus not noticeable scales did not produce significant main effects or interactions in either coder ratings or teacher rankings. Creativity appears to be a difficult characteristic to assess, not only because it is hard to define or identify, but also because teachers, and especially coders, have few opportunities to observe students engage in creative activities. The lack of significant findings for stands out versus not noticeable may be due to differing ideas as to what is remarkable about particular students (disruptive behavior, well-adjusted behavior, flaming red hair, etc.).

In summary, it appears that the teacher ranking scales provide a generally valid assessment of student characteristics and behavior. Though teachers and observers did not always agree in their perceptions of students, the discrepancies seem to arise from halo effects in the teacher rankings, caused by teachers' concern about academic performance. Nevertheless, the teacher

ranking data did seem to reflect some actual differences in student behavior.

Thus, unless there is reason to suspect otherwise, teacher perceptions of student characteristics should be considered as generally accurate and valid, and as based on objective student behavior. Inaccurate teacher perceptions which are strong and stable enough to produce self-fulfilling prophecy effects undoubtedly exist, but these are likely to be much less frequent than accurate and flexible perceptions, at least for most teachers.

The sex difference data further support studies indicating that they reflect real student sex differences rather than teacher bias (Brophy & Good, 1974). The grade level data indicate that teachers' perceptions of students are quite specific to the ranges of characteristics typical of the students they teach, and that they typically do not show evidence of perspective based on knowledge of grade level differences. This indicates the need for specification of the grade levels involved in studies of teacher perceptions, and for caution concerning generalizations to different grades.

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Table 1. Numbers of Children Who Received Consistent Teacher Rankings for Each Scale (Possible N=362).

Scales	N
Calm vs. restless	237
Careful vs. careless	245
Happy vs. unhappy	189
Would like to keep vs. remove	201
Requires special attention vs. doesn't	207
Stands out vs. not noticeable	190
Creative vs. not creative	193
Attractive vs. unattractive	203
Persistent vs. gives up easily	244
Probable highest achiever vs. lowest	284
Mature vs. immature	257
Cooperative vs. uncooperative	232
Looks you in eye vs. averts eye	154

Table 2. Sex and Grade Differences from Teacher Rankings of Students on the Thirteen Student Attribute Scales.

Scale: Calm vs. Restless

		Grade			
		2nd	3rd	4th	5th
Males	$\bar{X}$	1.77	1.86	1.77	2.27
	sd	0.82	0.74	0.69	0.70
	N	26	29	48	15
Females	$\bar{X}$	2.44	2.25	2.18	2.16
	sd	0.64	0.79	0.60	0.60
	N	27	24	49	19

Source	df	MS	F	p
Total	236	0.52		
Between	7	1.66		
Sex	1	5.99	12.41	***
Grade	3	0.50	1.03	
G X S	3	1.37	2.84	*
Within	229	0.48		

Scale: Careful vs. Careless

		2nd	3rd	4th	5th
Males	$\bar{X}$	1.81	1.97	1.88	1.93
	sd	0.75	0.70	0.77	0.80
	N	21	32	51	15
Females	$\bar{X}$	2.45	2.14	2.24	2.21
	sd	0.76	0.74	0.68	0.63
	N	20	29	58	19

Source	df	MS	F	p
Total	244	0.55		
Between	7	1.18		
Sex	1	6.54	12.45	***
Grade	3	0.06	0.11	
G X S	3	0.51	0.97	
Within	237	0.53		

Scale: Happy vs. Unhappy

		Grade 2nd	3rd	4th	5th
Males	$\bar{X}$	1.73	1.89	1.93	2.15
	sd	0.79	0.64	0.74	0.56
	N	11	27	43	13
Females	$\bar{X}$	2.16	2.17	2.18	2.50
	sd	0.69	0.65	0.60	0.65
	N	19	23	39	14

Source	df	MS	F	p
Total	188	0.47		
Between	7	1.06		
Sex	1	4.08	9.18	***
Grade	3	1.05	2.35	
G X S	3	0.06	0.14	
Within	181	0.44		

Scale: Probable Highest Achiever vs. Lowest Achiever

		2nd	3rd	4th	5th
Males	$\bar{X}$	1.96	2.03	2.00	1.92
	sd	0.87	0.79	0.72	0.72
	N	26	35	59	24
Females	$\bar{X}$	2.09	2.30	2.05	2.21
	sd	0.78	0.72	0.71	0.79
	N	32	27	62	19

Source	df	MS	F	p
Total	283	0.56		
Between	7	0.50		
Sex	1	2.10	3.71	*
Grade	3	0.25	0.45	
G X S	3	0.20	0.36	
Within	276	0.57		

Scale: Mature vs. Immature

		2nd	3rd	4th	5th
Males	$\bar{X}$	1.88	1.87	1.83	2.06
	sd	0.80	0.68	0.69	0.75
	N	24	30	54	17
Females	$\bar{X}$	2.28	2.12	2.19	2.17
	sd	0.75	0.65	0.68	0.78
	N	29	33	47	23

Source	df	MS	F	p
Total	256	0.52		
Between	7	0.82		
Sex	1	4.52	8.90	***
Grade	3	0.18	0.36	
G X S	3	0.23	0.45	
Within	249	0.51		

Scale: Cooperative vs. Uncooperative

		Grade 2nd	3rd	4th	5th
Males	$\bar{X}$	1.71	1.87	1.77	2.07
	sd	0.81	0.72	0.63	0.62
	N	24	31	48	14
Females	$\bar{X}$	2.43	2.39	2.19	2.44
	sd	0.66	0.62	0.59	0.51
	N	23	31	43	18

Source	df	MS	F	p
Total	231	0.48		
Between	7	2.26		
Sex	1	12.86	30.70	***
Grade	3	0.68	1.63	
G X S	3	0.31	0.74	
Within	224	0.42		

Scale: Creative vs. Not Creative

		2nd	3rd	4th	5th
Males	$\bar{X}$	1.71	2.00	2.14	2.00
	sd	0.83	0.73	0.73	0.66
	N	14	20	44	15
Females	$\bar{X}$	2.13	2.29	2.05	2.19
	sd	0.76	0.64	0.55	0.66
	N	23	21	40	16

Source	df	MS	F	p
Total	192	0.48		
Between	7	0.60		
Sex	1	1.66	3.51	
Grade	3	0.38	0.81	
G X S	3	0.47	0.99	
Within	185	0.47		

Scale: Attractive vs. Unattractive

		2nd	3rd	4th	5th
Males	$\bar{X}$	1.63	1.94	2.06	1.93
	sd	0.81	0.75	0.63	0.46
	N	16	17	49	15
Females	$\bar{X}$	2.35	1.89	1.98	2.30
	sd	0.81	0.57	0.71	0.73
	N	20	19	47	20

Source	df	MS	F	p
Total	202	0.49		
Between	7	1.12		
Sex	1	2.42	5.14	*
Grade	3	0.29	0.61	
G X S	3	1.53	3.23	*
Within	195	0.47		

Scale: Persistent vs. Gives Up

		Grade 2nd	3rd	4th	5th
Males	$\bar{X}$	1.83	1.90	1.87	2.11
	sd	0.78	0.71	0.77	0.68
	N	23	30	52	18
Females	$\bar{X}$	2.30	2.28	2.28	2.37
	sd	0.82	0.59	0.64	0.68
	N	23	29	50	19

Source	df	MS	F	p
Total	243	0.53		
Between	7	1.31		
Sex	1	7.71	15.28	***
Grade	3	0.36	0.72	
G X S	3	0.11	0.23	
Within	236	0.50		

Scale: Would Like to Keep vs. Would Like Removed

		2nd	3rd	4th	5th
Males	$\bar{X}$	1.91	2.09	1.90	2.05
	sd	0.94	0.67	0.68	0.71
	N	21	23	39	19
Females	$\bar{X}$	2.50	2.23	2.32	2.16
	sd	0.76	0.44	0.52	0.90
	N	20	13	47	19

Source	df	MS	F	p
Total	200	0.50		
Between	7	0.91		
Sex	1	4.33	8.87	***
Grade	3	0.09	0.19	
G X S	3	0.59	1.20	
Within	193	0.49		

Scale: Requires Special Attention vs. Does Not Require Special Attention

		2nd	3rd	4th	5th
Males	$\bar{X}$	2.10	2.13	2.13	2.00
	sd	0.94	0.68	0.66	0.71
	N	21	24	39	09
Females	$\bar{X}$	1.83	1.77	1.78	1.50
	sd	0.83	0.62	0.66	0.52
	N	23	31	46	14

Source	df	MS	F	p
Total	206	0.51		
Between	7	1.00		
Sex	1	5.44	10.95	***
Grade	3	0.43	0.86	
G X S	3	0.09	0.19	
Within	199	0.50		

Scale: Stands Out vs. Not Noticeable

		Grade 2nd	3rd	4th	5th
Males	$\bar{X}$	2.23	2.15	2.75	2.30
	sd	0.83	0.67	0.70	0.48
	N	13	26	40	10
Females	$\bar{X}$	2.05	2.18	1.90	2.14
	sd	0.83	0.64	0.71	0.77
	N	20	17	50	14

Source	df	MS	F	p
Total	189	0.50		
Between	7	0.26		
Sex	1	0.73	1.43	
Grade	3	0.25	0.49	
G X S	3	0.12	0.24	
Within	182	0.51		

Scale: Looks You in the Eye vs. Averts Eyes

		2nd	3rd	4th	5th
Males	$\bar{X}$	1.87	2.00	1.93	1.78
	sd	0.64	0.50	0.78	0.67
	N	15	09	27	09
Females	$\bar{X}$	2.00	2.13	2.14	2.25
	sd	0.75	0.62	0.52	0.68
	N	19	16	43	16

Source	df	MS	F	p
Total	153	0.42		
Between	7	0.37		
Sex	1	1.69	4.05	*
Grade	3	0.09	0.22	
G X S	3	0.20	0.48	
Within	146	0.42		

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* $p < .05$

** $p < .01$

*** $p < .001$

Table 3. Sex and Grade Differences from Coder Ratings of Students on the Thirteen Student Attribute Scales.

Scale: Calm vs. restless

		Grade 2nd	3rd	4th	5th
Males	$\bar{X}$	3.82	3.94	3.86	4.24
	sd	1.53	1.44	1.33	1.23
	N	34	46	76	25
Females	$\bar{X}$	4.70	4.64	4.73	4.52
	sd	1.41	1.17	1.18	0.91
	N	37	42	73	29

Source	df	MS	F	p
Total	361	1.80		
Between	7	6.00		
Sex	1	36.80	22.05	***
Grade	3	0.20	.12	
G X S	3	1.60	0.94	
Within	354	1.60		

Scale: Careful vs. careless

		2nd	3rd	4th	5th
Males	$\bar{X}$	3.82	4.04	4.14	4.72
	sd	1.45	1.37	1.17	1.28
	N	33	46	76	25
Females	$\bar{X}$	4.84	4.76	4.76	4.79
	sd	1.39	1.21	1.09	1.11
	N	37	42	72	29

Source	df	MS	F	p
Total	359	1.60		
Between	7	6.60		
Sex	1	28.80	18.78	***
Grade	3	2.80	1.80	
G X S	3	3.10	1.98	
Within	352	1.50		

Scale: Happy vs. Unhappy

		Grade 2nd	3rd	4th	5th
Males	$\bar{X}$	4.67	4.72	4.70	4.88
	sd	1.24	1.17	0.92	1.09
	N	33	46	76	25
Females	$\bar{X}$	4.57	4.67	4.58	4.62
	sd	1.28	1.14	1.12	1.32
	N	37	42	73	29

Source	df	MS	F	p
Total	360	1.30		
Between	7	0.40		
Sex	1	1.40	1.07	
Grade	3	0.30	0.22	
G X S	3	0.20	0.12	
Within	353	1.30		

Scale: Probable Highest Achievers vs. Low Achiever

		2nd	3rd	4th	5th
Males	$\bar{X}$	3.79	4.04	4.20	4.52
	sd	1.39	1.46	1.21	1.30
	N	33	46	75	25
Females	$\bar{X}$	4.65	4.67	4.21	4.48
	sd	1.38	1.12	1.05	1.15
	N	37	42	73	29

Source	df	MS	F	p
Total	359	1.60		
Between	7	3.80		
Sex	1	10.30	6.69	**
Grade	3	1.50	0.99	
G X S	3	3.90	2.55	*
Within	352	1.50		

Scale: Mature vs. Immature

		2nd	3rd	4th	5th
Males	$\bar{X}$	3.94	4.20	4.32	4.80
	sd	1.07	1.29	1.18	1.00
	N	34	46	76	25
Females	$\bar{X}$	4.49	4.17	4.59	4.55
	sd	1.39	1.25	1.15	0.99
	N	37	42	73	29

Source	df	MS	F	p
Total	361	1.40		
Between	7	3.00		
Sex	1	1.40	1.03	
Grade	3	4.20	2.99	*
G X S	3	2.40	1.69	
Within	354	1.40		

Scale: Cooperative vs. Uncooperative

		Grade 2nd	3rd	4th	5th
Males	$\bar{X}$	4.38	4.11	4.58	4.88
	sd	1.44	1.60	1.06	0.93
	N	34	46	76	25
Females	$\bar{X}$	5.14	5.07	5.34	5.14
	sd	1.38	1.07	0.84	0.88
	N	37	42	73	29

Source	df	MS	F	p
Total	361	1.50		
Between	7	7.30		
Sex	1	36.80	27.48	***
Grade	3	2.90	2.19	
G X S	3	1.80	1.32	
Within	354	1.30		

Scale: Creative vs. Not Creative

		2nd	3rd	4th	5th
Males	$\bar{X}$	4.33	4.00	4.24	4.41
	sd	1.45	1.51	1.20	1.38
	N	33	45	75	24
Females	$\bar{X}$	4.35	4.10	3.94	3.89
	sd	1.44	1.24	1.15	1.09
	N	37	40	71	27

Source	df	MS	F	p
Total	351	1.70		
Between	7	1.60		
Sex	1	2.40	1.42	
Grade	3	1.30	0.76	
G X S	3	1.60	0.96	
Within	344	1.70		

Scale: Attractive vs. Not Attractive

		2nd	3rd	4th	5th
Males	$\bar{X}$	4.53	4.65	4.41	4.44
	sd	1.14	1.16	1.18	1.00
	N	34	46	76	25
Females	$\bar{X}$	4.76	4.38	4.26	4.62
	sd	1.19	1.32	1.23	1.21
	N	37	42	73	29

Source	df	MS	F	p
Total	361	1.40		
Between	7	1.10		
Sex	1	0.00	0.00	
Grade	3	1.30	0.91	
G X S	3	1.20	0.83	
Within	354	1.40		

Scale: Persistent vs. Gives Up

		Grade 2nd	3rd	4th	5th
Males	$\bar{X}$	3.76	3.96	4.20	4.76
	sd	1.39	1.38	1.22	1.30
	N	33	46	75	25
Females	$\bar{X}$	4.68	4.74	4.74	4.66
	sd	1.36	1.17	1.02	1.11
	N	37	42	72	29

Source	df	MS	F	p
Total	358	1.60		
Between	7	6.40		
Sex	1	22.20	14.72	***
Grade	3	3.40	2.26	
G X S	3	4.00	2.67	*
Within	351	1.50		

Scale: Would Like to Keep Another Year vs. Would Like to Have Removed

		2nd	3rd	4th	5th
Males	$\bar{X}$	4.15	4.00	4.30	4.60
	sd	1.25	1.45	1.01	1.08
	N	33	46	76	25
Females	$\bar{X}$	4.51	4.60	4.19	4.31
	sd	1.35	1.19	1.04	0.89
	N	37	42	73	29

Source	df	MS	F	p
Total	360	1.40		
Between	7	1.90		
Sex	1	1.50	1.14	
Grade	3	0.60	0.46	
G X S	3	3.30	2.47	
Within	353	1.30		

Scale: Requires Special Attention vs. Does Not Require It

		2nd	3rd	4th	5th
Males	$\bar{X}$	4.09	3.91	3.78	3.00
	sd	1.42	1.44	1.20	1.00
	N	34	46	76	25
Females	$\bar{X}$	3.38	3.26	3.32	2.97
	sd	1.36	1.21	0.96	1.09
	N	37	42	73	29

Source	df	MS	F	p
Total	361	1.60		
Between	7	6.90		
Sex	1	17.00	11.61	*
Grade	3	8.60	5.85	**
G X S	3	1.80	1.26	
Within	354	1.50		

Scale: Very Noticeable vs. Not Noticeable

		Grade			
		2nd	3rd	4th	5th
Males	$\bar{X}$	4.24	4.54	4.17	3.88
	sd	1.33	1.28	1.22	1.09
	N	34	46	76	25
Females	$\bar{X}$	4.30	3.79	3.85	4.24
	sd	1.15	1.16	1.19	1.38
	N	37	42	73	29

Source	df	MS	F	p
Total	361	1.50		
Between	7	2.70		
Sex	1	2.10	1.42	
Grade	3	1.00	0.68	
G X S	3	4.60	3.10	*
Within	354	1.50		

Scale: Looks You in the Eye vs. Averts Eyes

		2nd	3rd	4th	5th
Males	$\bar{X}$	4.52	4.54	4.59	4.92
	sd	1.20	1.39	1.19	1.15
	N	33	43	70	25
Females	$\bar{X}$	4.76	4.60	4.36	4.52
	sd	1.23	1.27	1.29	1.30
	N	37	33	70	29

Source	df	MS	F	p
Total	341	1.60		
Between	7	1.10		
Sex	1	0.50	0.32	
Grade	3	0.80	0.53	
G X S	3	1.60	1.00	
Within	334	1.60		

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* $p < .05$

** $p < .01$

*** $p < .001$

Table 4. Correlations between Teacher Rankings and Coder Ratings on the 13 Scales.

Scales	r
Calm vs. restless	.59**
Careful vs. careless	.49**
Happy vs. unhappy	.30**
Probable highest achiever vs. lowest	.54**
Mature vs. immature	.43**
Cooperative vs. uncooperative	.49**
Creative vs. not creative	.28**
Attractive vs. unattractive	.34**
Persistent vs. gives up easily	.48**
Would like to keep vs. remove	.37**
Requires special attention vs. doesn't	.46**
Stands out vs. not noticeable	.43**
Looks you in the eye vs. averts eyes	.20*

* $p < .05$

** $p < .01$